

**CLAIMS:**

**What is Claimed is:**

1. An image processing apparatus for processing images picked up on a plurality of image pickup planes having different distances to a lens, the apparatus  
5 comprising:  
acquiring means for acquiring a plurality of images of a target object picked up on said plurality of image pickup planes;  
first computing means for computing weights of said plurality of images acquired by said acquiring means;  
10 second computing means for computing averages of said plurality of images acquired by said acquiring means; and  
image creating means for creating an optimum image of said target object by obtaining a weighted average based on said weights computed by said first computing means and on said averages of said plurality of images computed by said second  
15 computing means.
2. An image processing apparatus according to claim 1, further comprising image pickup means for picking up images of said target object on said plurality of image pickup planes.
3. An image processing method for use with an image processing  
20 apparatus for processing images picked up on a plurality of image pickup planes having different distances to a lens, the method comprising the steps of:  
acquiring a plurality of images of a target object picked up on said plurality of image pickup planes;

firstly computing weights of said plurality of images acquired in said acquiring step;

secondly computing averages of said plurality of images acquired in said acquiring step; and

- 5           creating an optimum image of said target object by obtaining a weighted average based on said weights computed in said first computing step and on said averages of said plurality of images computed in said second computing step.

4.       A storage medium which stores a computer-readable program for use with an image processing apparatus for processing images picked up on a plurality of  
10 image pickup planes having different distances to a lens, said program comprising the steps of:

acquiring a plurality of images of a target object picked up on said plurality of image pickup planes;

- 15           firstly computing weights of said plurality of images acquired in said acquiring step;

secondly computing averages of said plurality of images acquired in said acquiring step; and

- creating an optimum image of said target object by obtaining a weighted average based on said weights computed in said first computing step and on said  
20 averages of said plurality of images computed in said second computing step.